

CLAIMS

I/We claim:

- [c1] 1. A method for forming LED, comprising the steps of:
forming an LED epitaxial layer on a provisional substrate;
etching said LED epitaxial layer to form LED chips by means of
photolithography;
forming a reflecting layer on said LED chips;
forming a metal layer on said reflecting layer;
removing said provisional substrate to expose surfaces of said LED chips;
forming pads on said surfaces of said LED chips; and
separating said metal layer to form individual LED chips by means of
mechanical force.
- [c2] 2. The method in claim 1, wherein a material of said reflecting layer is
Ag, Al, Rh, Pt, Pd, Ni, Ti, Co, Au, or the combination thereof.
- [c3] 3. The method in claim 1, wherein said metal layer is formed by means
of electroplating, electroless plating, chemical vapor deposition, or the
combination thereof.
- [c4] 4. The method in claim 1, wherein said metal layer is formed by means
of a physical vapor deposition.
- [c5] 5. The method in claim 4, wherein said physical vapor deposition is
evaporation, sputtering deposition, or the combination thereof.

- [c6] 6. The method in claim 1, wherein said provisional substrate is removed by means of polishing, etching, laser ablation, or the combination thereof.
- [c7] 7. The method in claim 1, wherein a material of said metal layer is Cu, Al, Ni, Mo, W, Ag, Au, Ti, Co, Pd, Pt, Fe, or the combination thereof.
- [c8] 8. The method in claim 1, wherein a thickness of said metal layer is more than 30µm.
- [c9] 9. The method in claim 1, wherein a thickness of said metal layer between said every two LED chips is 5-30µm.
- [c10] 10. A method for forming LED, comprising the steps of:
forming an LED epitaxial layer on a provisional substrate;
forming a reflecting layer on said LED epitaxial layer;
forming a metal layer on said reflecting layer;
etching said LED epitaxial layer, said reflecting layer, and said metal layer to form LED chips by means of photolithography;
removing said provisional substrate to expose surfaces of said LED chips;
and
forming pads on said surfaces of said LED chips.
- [c11] 11. The method in claim 10, wherein a material of said reflecting layer is Ag, Al, Rh, Pt, Pd, Ni, Ti, Co, Au, or the combination thereof.
- [c12] 12. The method in claim 10, wherein said metal layer is formed by means of electroplating, electroless plating, chemical vapor deposition, or the combination thereof.

- [c13] 13. The method in claim 10, wherein said metal layer is formed by means of a physical vapor deposition.
- [c14] 14. The method in claim 13, wherein said physical vapor deposition is evaporation, sputtering deposition, or the combination thereof.
- [c15] 15. The method in claim 10, wherein said provisional substrate is removed by means of polishing, etching, laser ablation, or the combination thereof.
- [c16] 16. The method in claim 10, wherein a material of said metal layer is Cu, Al, Ni, Mo, W, Ag, Au, Ti, Co, Pd, Pt, Fe, or the combination thereof.
- [c17] 17. The method in claim 10, wherein a thickness of said metal layer is more than 30 μ m.